

8, 16

Soft Water  
in  
Every Home

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## Important Facts You Should Know About Water

WATER is as essential to every phase of modern life and its bears such an important relation to health and personal comfort that everyone should know more about those characteristics of water that make it desirable or detrimental for domestic and personal uses.

Water is the greatest solvent known to man; that is, it will dissolve readily a greater number of substances than any other liquid, and for that reason it always contains many impurities. As water falls from the sky in the form of rain, it gathers up all the particles of dust, smoke, impurities and foul gases that have risen from the ground and are floating about in the air. When it strikes the earth some of it runs off along the surface taking borders and rocks and some sinks into the ground to form springs and to supply our artesian wells. In any case the water is in contact with the earth passing over it through it and its wonderful destroying power is hard at work gathering up mineral and organic impurities at every foot of progress.

If it is surface water, that is, a brook, a river, it will pick up and carry along small

particles of the earth's surface in addition to dissolving some of it, so that the water will be "rily" or turbid as well as contain dissolved minerals. Spring or well water on the other hand is generally filtered by its passage through the earth and therefore is usually quite clean, but by reason of being in contact with the rocky formation under the ground, it contains more dissolved substances than surface water and so contains more hardness.

## What Is Hard Water?

"Hard Water" is the name applied to any water containing lime or magnesia compounds in solution, the amount of lime and magnesia determining the degree of hardness. These compounds effect the lathering properties of soap, so that a hard water may be distinguished by the fact that it is more difficult to wash with than a soft water. Unfortunately for mankind, lime and magnesia compounds are distributed everywhere throughout the earth's surface so that although some water supplies are softer than others, it is a rare occurrence to find soft water existing in nature. Until Permutit was developed, absolutely soft water, containing no



*Hard water rapidly forms scale on kettles and tanks at the point where they stand over a limey water.*

hardness (zero water) had been produced only in the laboratory. Today, however, zero water, as accurate as the most scientific laboratory product, is available in every home.

## Soft Water in the Home

The advantages of clean, soft zero water in a household are really tremendous, for many troubles and discomforts that are attributed to other causes can be traced to hard water. The hardness, that is, the lime and magnesia compounds that are always present in untreated water, combine with soap, making it difficult to obtain a good lather as previously stated, but that is not all. In combining with soap, these compounds form an insoluble sticky curd that causes trouble and does damage in a multitude of ways not generally known outside of scientific circles. It is the soap curds, not dirt, that leave a line of deposit around a bath tub or wash basin after washing, and travelers on Western railroads will recall the washing difficulties encountered where the water supply is particularly hard.



*The lime and magnesia in hard water will deposit in pipes wherever there is a break, interfering with the proper flow of water and resulting in water, fixture, and connection difficulties.*



## *The Bath*

When soap is used with hard water in the bath, the sticky soap curds that are formed work into the pores of the skin, clog them up and prevent the free exit of body impurities that is essential to a smooth, clear, healthy skin. Not only does this affect the complexion and the general condition of the skin, but it must necessarily be detrimental to the health, for it is known that a man coated with varnish would live but a few days, and although hard water soap curds are far less effective than varnish, they nevertheless clog up the skin pores to no small extent. Furthermore, they are responsible for real bodily discomfort.

Everyone is familiar with the fact that an object can be kept cool on a hot day by covering it with a damp cloth, the evaporation having a cooling effect. That is the principle utilized for cooling drinking water in the army, and for the iceless ice-boxes that are so effective in summer, and it is also the principle provided by Nature to keep mankind

cool in hot weather, by evaporation of moisture exuded from the pores of the skin. The hard water soap cards interfere with Normal cooling process, and result in a sticky, clammy discomfort too well known to require description. The soft water supplied to Permatite cannot possibly form those sticky soap cards; for all hardness is removed from the water and Permatite owners are fond of their explanations of delight at the unexpected benefits and comforts derived from the use of soft water. It is available for small children.

## *The Shampoo and Shave*

In shampooing with hard water the crystalline soap cards are deposited on the hair, making a sticky, and moist, lathering in fact. Hundreds of hairdressing establishments have adopted Permatite for their owners' sake. For reasons given water has been known to impart an soft, delicate texture and beautiful gloss to the hair, and a clean, vigorous finish to the body. For shaving, the heavy, hot tactics



lather produced by zero water quickly softens the beard, and imparts a genuine comfort unknown to hard water users.

## *The Laundry*

In the laundry soft water imparts a snowy, dry fluffiness, and a sweet smelling cleanliness to the wash that is absolutely unknown to hard water users. The absence of sticky soap curds gives a longer life to linens and produces a quality in woolens and dainty laces that cannot be surpassed. Colored goods take on a brighter hue, and delicate fabrics may be laundered without fear of harm. Textile mills and laundries the country over have found zero water to be absolutely invaluable



in producing the highest quality of work and for the same reasons, a Permutit System in the home adds unknown delights to the donning of fresh laundered linens. In the washing process too, considerable quantities of soap are actually saved by the use of zero water, an economy that is duly appreciated.

## The Heating System

In addition to its destructive property of turning soap cards, the hardness in water has another unfortunate characteristic, or precipitating one in the form of a hard insoluble scale, when subjected to heat.

When hard water is heated, for example, the lime and magnesia compounds will deposit on the walls of the boiler, in the pipes and connecting heating from the boiler, or wherever there is heat. This results in the clogging of pipes in steam and water heating systems, gas burners and hot water tanks. When the pipes become "blown up" it is lined with a layer of scale, it requires more heat to obtain the necessary amount of heat, for each  $F = \frac{0.007}{\text{efficiency}}$  efficient system. Limes and hardness in pipes also cause the new system of Farnam's System will probably come right in any kind of a heater. This is demonstrated by the fact that hundreds of Farnam Systems are in use in large commercial business places for their purpose. The reason of efficiency of heating systems, the reduced trouble from limes, hardness and burned out pipes, and the immediate saving of fuel is a result of



considerable satisfaction to Permutit owners. The reduction in repair and fuel bills also forms a saving of no small consequence.

## The Kitchen

In the kitchen, pots and pans will be found to take on a brighter lustre when zero water is used, but it is in the cooking that its use becomes of really great importance. To cook food, heat must be applied exactly as is done in the heating system, and as in that case, scale is deposited by the lime and magnesia compounds, but *it is deposited on the food that*

*is being cooked.* Vegetables, such as peas, beans, corn, beets, or things having a skin or fibre structure are particularly susceptible to these hard water deposits, and are made harder or tougher to a marked degree. Leading canning factories and preservers of fruits and jams have installed Permutit Softeners in their



plants at their upper stages than among  
the undergrowth. Barnard and others, he found  
vegetation and fauna. However, according  
Perry's report there was little vegetation  
in the marshy and rocky areas. However,  
was good, though no more than the  
usual except during periods of great  
rainfall.

## What Dermott Is

Planted in a shallow  
pans, the young tree  
showed that without con-  
siderable protection of the  
top and the branches could  
not live. The moderate  
heat is required in order  
to bring water through a  
series of glandular roots.  
A small tree, 10 ft., has  
been seen by many  
countries outside the tropics.  
However, the tree  
is fast and cannot  
with difficulty be  
got up. It is  
also known as  
the tree. The tree  
is a good  
and



## How It Works

More information on how trees grow  
throughout the year is available at [www.gardeningknowhow.com](http://www.gardeningknowhow.com).



is found to expand with the seasons, but has been taken out of the system, and must therefore be regenerated. This, however, is apparently similar.

As regards as the size of the ulcers it is observed and a postoperative increased voluntary motion than are reported. This loss is then slight, the pain subsides, and in a short time the patient is again enabled to resume all his former sports. At no time during the first year does the patient complain of any stiffness or soreness, and his own strength becomes full and all regional disease seems to have disappeared. Thus the individual "comes up strong and alert" enough to furnish a positive support to those opponents whom he has vanquished in a few minutes, and even a week.

### *Better Than Pain Medication*

Principles involved: When we have pain, there is something to touch, move, and stimulate, and is absolutely free from all unnecessary and all harmful mental impressions. The hand and fingers can contact the skin, and when one touches another, or pressure is applied to his finger with, and the other giving a grip on. The experience need be concerned with none of your greater desires, such as sex, power, and money.

### *If You Are Building a House:*

Do not fail to incorporate a Physician's Service.

for your home. Write us at once, or ask your architect to get you all the details, for it can be installed with your original plumbing and will keep the heating system and all the piping throughout your house in good condition from the start.

## *What Permutit Costs*

The size and cost of a Permutit System depends upon the amount of hardness in the water and the quantity of water used. The first factor can only be determined by a reliable laboratory analysis, and this the Permutit Company will do free of charge. The second may be estimated from the number of people in your household, including servants, and average number of guests. If soft water is desired in the garage, stables or similar places, the quantity can be estimated from the general number of faucets to be supplied, and information concerning the uses to which it would be put.

## *How to find the Cost for Your Home*

To obtain an estimate of the cost of a Permutit System in your home, fill out carefully and accurately the post card enclosed in this booklet, and mail to the Permutit Company, 440 Fourth Ave., New York City. If you live in a large city an analysis of the



*Perma-Safe perfectly adapted to homes of moderate size and may  
readily be installed in most cases.*

water will be on file at the Perma-Safe Office, but should you be supplied by a town or hillage system, or have your own well water supply, fit a clean half-gallon jug or bottle. It must be earthenware or glass and send it by express to the Perma-Safe Company.

Be sure that the bottle is corked tight and packed to prevent breakage and freezing in the winter. A small quantity of a creosol with excelsior, sawdust, or scampi, will serve excellently.

## *Soft Water for Every Home*

Thousands of Perma-Safe Water Softeners are in daily use. They are being produced continuously in all parts of the country, and the apparatus built for hospitals and at just as accurate, just as scientific as the big industrial machines that are being used by the

most exacting commercial and scientific purposes. The Permutit Company stands behind its record of producing only the best that man can devise, and offers in testimonial of that fact thousands of references from satisfied Permutit owners in every industrial enterprise and private pursuit.

Prominent hotels are Permutit equipped, leading hospitals use it for the protection and comfort of their patients, and many of the foremost doctors in the country have Permutit in their homes. It is a comfort, not a luxury, and a safeguard in the home that is established and recognized in all parts of the globe.

## *Nature's Cleanser*

Soft water has been truthfully called "Nature's Cleanser" for in the form of rain from the clouds it is the great solvent, the universal purifier of all things in nature. How wonderfully soft and sleek is the fur of wild animals washed only by rain water, and how refreshing is the air when it has been swept clean of dust and gases after a gentle fall of rain.

Permutit brings to the home all the delights, all the beauties of this wonderful tonic, and its friends can adequately convey the pleasure, the satisfaction, that becomes the daily portion of Permutit owners.



A TWO STORY HOUSE  
BY JAMES H. DODD



### BRANCH OFFICES

ALBANY, N. Y.  
614-615 Child Building

BOSTON, MASS.  
10 Milk Street

BUFFALO, N. Y.  
104 Brantine Building

CHATTANOOGA, TENN.  
412 Volunteer State Life Bldg

CHICAGO, ILL.  
205 S. LaSalle Street

CINCINNATI, OHIO  
Union Central Bldg.

CLEVELAND, OHIO  
700 B. F. Keith Building

DAYTON, OHIO  
10 S. Rescht Building

DETROIT, MICH.  
204 Owen Building

KANSAS CITY, MO.  
310-311 Lathrop Building

LOS ANGELES, CAL.  
509 Wright-California Building

MINNEAPOLIS, MINN.  
1046 McGuire Building

PHILADELPHIA, PA.  
715 Liberty Building

PITTSBURGH, PA.  
921 Union Trust Building

SAN FRANCISCO, CAL.  
500 Balboa Building

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275 Craig Street

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W. J. Westaway Co., Mac &  
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